

REMARKS

1. In response to the final Office Action mailed April 6, 2005, Applicants respectfully request reconsideration. Claims 53-107 and 109-113 were last presented for examination. (Applicants note that the Office Action Summary incorrectly refers to previously-canceled claim 108 as a pending claim.) In the outstanding Office Action, claims 91-97 and 113 were rejected. Claims 53-90 were allowed and claims 98-107 and 109-112 were objected to. Claims 91-97 have been amended. No claims have been canceled or added in this paper. Thus, upon entry of this paper, claims 53-107 and 109-113 will remain pending in this application. Of these sixty (60) claims, four claims (claim 53, 73, 91 and 97) are independent. Based on the above Amendments and following Remarks, Applicants respectfully request that the outstanding objections and rejections be reconsidered, and that they be withdrawn.

Allowable Subject Matter

2. Applicants note with appreciation the Examiner's indication that claims 53-90 are allowable and that claims 98-107 and 109-112 would be in condition for allowance if combined with their respective base and intervening claims.

Claim Rejections

3. Claims 97 and 113 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,166,864 to Chitwood, *et al.* (hereinafter, "Chitwood"). Specifically, the Examiner asserts that Chitwood teaches all the limitations of claim 97 with the exception of the surface trace characteristic impedance, asserting that the "characteristic impedance of the trace is inherent." Applicants respectfully disagree.

4. Applicants' invention, as recited in amended claim 97, recites "[a] printed circuit board comprising: a printed wiring board with at least one surface trace; at least one component mounted on said printed wiring board; and an electrically continuous EMI shield conformingly adhered to top and bottom surfaces of said printed circuit board, comprising a conductive coating and a dielectric coating interposed between said conductive coating and said printed circuit board surfaces; *wherein said EMI shield has a*

composition and thickness such that said at least one surface trace has a desired characteristic impedance.” (See, Applicants’ claim 97, above; emphasis added.)

8. Chitwood discloses a printed circuit board conformal coating having dielectric layers 26 and 28, and metallic layers 32-40 applied directly to the entire printed circuit board to provide one permanent, contiguous layer thereon. (See, Chitwood, col. 2, ln. 58-col. 3. ln. 34.) Rather than providing any reference to any disclosure in the art of record which teaches or suggests the limitation of Applicant’s claimed invention of “... wherein said EMI shield has a composition and thickness such that said at least one surface trace has a desired characteristic impedance...” the Examiner asserts that the “characteristic impedance of a surface trace is inherent.” (See, Office Action, page 2.)

9. Although a surface trace may inherently have a characteristic impedance, what is neither taught nor suggested by, nor inherent in, Chitwood, is “an EMI shield having a composition and thickness such that ... at least one surface trace has a desired characteristic impedance...” In fact, there is no consideration whatsoever in Chitwood of considering the characteristic impedance of the surface traces on Chitwood’s printed wiring board when determining the composition or thickness of the dielectric layers 26 and 28 and metallic layers 32-40. For at least this reason, Applicants respectfully assert that claim 97, as amended, is patentable over Chitwood and the other art of record.

10. Applicants note that the Office Action summary referred to claim 108; however, claim 108 was previously canceled. Also, claim 113 depends from dependent claim 110 which the Examiner objected to for depending on a rejected base claim. Accordingly, claim 113 should have been objected to rather than rejected.

11. Dependent claims 102-107 and 109-113 depend from and incorporate the subject matter of independent claim 97 and add additional subject matter which makes them independently patentable over the art of record. Accordingly, Applicants respectfully request that the outstanding rejections of the dependent claims be reconsidered and withdrawn.

12. Claim 91-96 have been rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,867,371 to Denzene, *et al.* (hereinafter, “Denzene”). Based upon the above Amendments and following Remarks, Applicants respectfully request reconsideration and withdrawal of these rejections.

13. Applicants' invention, as recited in amended claim 91, recites "[a] printed circuit board comprising: a printed wiring board; a component adapted to be detachably mounted on said printed wiring board; a first conformal EMI shield that coats a surface of said printed wiring board; a second conformal EMI shield that coats a surface of said detachable component; and a coupling mechanism configured to electrically disconnect and connect said first and second conformal EMI shields when said component and said printed wiring board are detached and reattached, respectively." (*See*, Applicants' claim 91, above.)

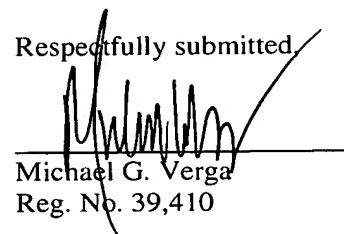
14. Denzene is directed to a shielded cover assembly for printed circuit boards comprising separately manufactured, preformed covers which are secured to an existing printed circuit board. (*See*, Denzene, Figure 1, Abstract, col. 3, ln. 48- col. 4, ln. 56.) There is no mention whatsoever of providing a detachable component in the printed circuit board of Denzene. As such, there is no teaching or suggestion in Denzene to provide "a coupling mechanism configured to electrically disconnect and connect said first and second conformal EMI shields when said component and said printed wiring board are detached and reattached, respectively ..." wherein the claimed first conformal EMI shield "coats a surface of said printed wiring board" while the claimed second conformal EMI shield "coats a surface of said detachable component." (*See*, Applicants' claim 91, above.) For at least this reason, Applicants respectfully assert that claim 91, as amended, is patentable over Denzene and the other art of record.

15. Dependent claims 92-96 depend from and incorporate the subject matter of independent claim 91 and add additional subject matter which makes them independently patentable over the art of record. Accordingly, Applicants respectfully request that the outstanding rejections of the dependent claims be reconsidered and withdrawn.

Conclusion

16. In view of the foregoing, this application should be in condition for allowance. A notice to this effect is respectfully requested.

Respectfully submitted,



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